

METALS (USA)

TUBE MILLS

Castrol Rustilo® DW 90 HF*

ANNUAL SAVINGS: \$33,560



THE SITUATION

A Midwest structural tube mill was using a water-soluble corrosion inhibitor at 30% concentration to protect bundles of tubing being sent to customers. The bundles of tubes when opened at customers had corrosion in-between the tubes. This caused rework and scrap costs at the tube mill.

BEFORE

- A water-soluble rust inhibitor was being applied to bundles of tubing by a “car wash” spray system.
- The water-based corrosion inhibitor would seep between the tubes and not let the water evaporate, causing corrosion.

AFTER

- Rustilo DW 90 HF oil-based inhibitor was implemented with a better spray system.
- This reduced the consumption of corrosion inhibitor and eliminated the corrosion issues.

THE SOLUTION

- Castrol Engineering recommended a change to both the fluid and the process after examining the type of corrosion in the tube bundles and reviewing the application method.
- The Rustilo DW 90 HF is an oil based corrosion inhibitor that does not trap water in the bundle and therefore eliminated the corrosion issues.
- The spray system was changed to apply only a light film to the bundles and not a full car wash effect. This reduced annual consumption of the rust inhibitor from 2200 gallons to 1400 gallons.

- Rustilo DW 90 HF saves re-work and scrap for tube mills.

RECOMMENDATIONS

The tube mill was recommended to apply the Rustilo DW 90 HF in an even spray pattern rather than with a car wash type application. This improved the application and removed the potential for water being trapped between the tubes in the bundle.

The Rustilo DW 90 HF can safely be sprayed since the flash point is well above 300°F. It can be evenly applied and gives a slightly oil film, providing up to 18 months of indoor storage protection.

CONCLUSION

After the Rustilo DW 90 HF was implemented, the tube mill had no re-work from corrosion and reduced consumption of the rust inhibitor. This saved the tube mill \$13,560 per year in fluid costs.

The mill also eliminated \$20,000 in re-work and scrap costs due to corrosion issues.



OTHER POTENTIAL APPLICATIONS

The Rustilo DW 90 HF can be used to protect a variety of metal parts from corrosion in long-term indoor storage. It provides this protection while having low odor and low VOC levels.